

Traumatic Brain Injury

What is Traumatic Brain Injury (TBI)?

Arizona Revised Statutes (ARS) §15-761(37) states: "Traumatic brain injury": (a) Means an acquired injury to the brain that is caused by an external physical force and that results in total or partial functional disability or psychosocial impairment, or both, that adversely affects educational performance. (b) Applies to open or closed head injuries resulting in mild, moderate, or severe impairments in one or more areas, including cognition, language, memory, attention, reasoning, abstract thinking, judgment, problem solving, sensory, perceptual and motor abilities, psychosocial behavior, physical functions, information processing, and speech. (c) Does not include brain injuries that are congenital or degenerative or brain injuries induced by birth trauma."

Two types of conditions qualify under the federal definition for closed or open head injury: 1) direct damage to the brain as a result of physical injury; or 2) damage due to bleeding, swelling, or infection resulting from trauma to the head.

The observed deficits of traumatic brain injury may be grouped in four major areas: physical, cognitive, social, behavioral, emotional, and executive functioning (planning, organizing). Depending on the part of the brain injured and the individual's age at the time of the injury, problems may not be evident until years later.

Typically, in medical usage, traumatic brain injury refers to the *event* of the injury rather than the *outcome*. Under the Individuals with Disabilities Education Act (IDEA), traumatic brain injury refers to the student's *functioning* and *performance* as a result of the injury. A student is determined eligible for special education services if: 1) the criteria of the federal definition of a student with a traumatic

brain injury is met, and 2) the multidisciplinary evaluation team determines that the head injury adversely affects a student's educational performance. The student may still qualify as disabled under Section 504 of the Rehab Act of 1973.

How Common are Traumatic Brain Injuries?

During the 2002-03 school year, 309 Arizona students were classified in the category of Traumatic Brain Injury and received special education services under TBI. This number does not include the TBI students counted as primary in other disability categories, but does represent 0.034 percent of the 912,083 students enrolled in Arizona public schools as of October 1, 2002.

What Effect Does Traumatic Brain Injury Have on a Child?

Head injuries may lead to persistent symptoms, such as: memory problems, attention span problems, lack of energy, disorganization, depression, anxiety, changes in sensory perception, and social/behavioral difficulties.

Communication problems linked to TBI may include: reduced hearing acuity, reading comprehension; verbal or written expression; excessive speech; and inappropriate subject focus.

School re-entry after the trauma is important. The rehabilitation team and school personnel must work together to minimize the stress of the child returning to the classroom. A comprehensive evaluation including the possible need for Assistive Technology (AT) devices will be critical for providing an appropriate educational program. Since recovery from TBI can be unpredictable, the child's program may need frequent reviews as recovery/rehabilitation occurs. DR13

References

Hoffman, C. et al. (1993). *Traumatic brain injury*. Presented at the Barrow Neurological Institute Inservice, Deer Valley, AZ.

National Information Center for Children and Youth with Disabilities (NICHCY). (2000). *General information about traumatic brain injury, fact sheet # 18*. Washington, DC.: NICHCY.

Slayden, R., MD, et al. (1992). *New disabilities: Traumatic brain injury*. Presented at the LAP Conference, San Antonio, TX.

Books

Calderwood, Lynsey. (2003). *Cracked: Recovering after Traumatic Brain Injury*. London, England. Jessica Kingsley Publisher

Schoenbrodt, L. (ed) (2001). *Children with Traumatic Brain Injury: A parent's guide*. Rockville MD: Woodbine House.

Senelick, R., Dougherty, K. 2nd Ed. (2001). *Living with brain injury: A guide for families*. Florence, KY: Delmar Learning.

Organizations/Hotlines/Websites

Arizona Governor's Council on Spinal and Head Injuries, 10640 N. 28th Dr., Ste. B102, Phoenix, AZ 85029, 602-863-0484, <http://www.azheadspine.org>

Barrow Neurological Institute, St. Joseph's Hospital. 350 W Thomas Rd., Phoenix, AZ 85013, 602-406-3000, <http://www.thebni.com/>

Brain Injury Association of America, 8201 Greenboro Dr., Ste. 611 McLean, VA 22102, 800-444-6443,

<http://www.biausa.org> of Arizona, 4250 E. Camelback Rd., Ste. K-220, Phoenix, AZ 85018, 888-305-0073, <http://www.biaaz.org>

Brain Injury Resource Center
<http://www.headinjury.com>

Centre for Neuro Skills,
<http://www.neuroskills.com>

Center for Assistive Technology and Environmental Access (CATEA), 490 Tenth St., NW, Atlanta, GA 30332-0156, 404-894-4960, <http://www.catea.org>

Easter Seal Society, 800-221-6827,
<http://www.easter-seals.org>

National Center for Neurogenic Communication Disorders, Bldg. #71, P.O. Box 210071, University of Arizona, Tucson, AZ 85721-0071. 520-621-1472,
<http://cnet.shs.arizona.edu>

National Rehabilitation Information Center (NARIC), 4200 Forbes Blvd., Ste. 202, Lanham, MD 20706, 800-346-2742, 301-459-5900, <http://www.naric.com>

Office for Children with Special Health Care Needs, 150 N. 18th, Ste. 330, Phoenix, AZ 85007, 602-542-1860
<http://www.hs.state.az.us/phs/ocshcn>

Parent Information Network, Arizona Department of Education, Exceptional Student Services, 1535 W. Jefferson, Phoenix, AZ 85007, 602-364-4015 or 800-352-4558
<http://www.ade.az.gov/ess/pinspals>
TBI Project 602-364-1989

Social Security Administration, 800-772-1213,
<http://www.ssa.gov>